

Appendices

Appendix A Parking Technical Memorandum

Appendices

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TECHNICAL MEMORANDUM

DATE May 9, 2017

TO City of Santa Ana

ADDRESS 20 Civic Center Plaza
Santa Ana, CA 92701

CONTACT Ron Ono
Administrative Services Manager

FROM Fernando Sotelo, PE, PTP, Senior Associate

SUBJECT **Centennial Park/Santa Ana College Park Replacement Project Parking Analysis**

PROJECT NUMBER SNT-18

Introduction and Environmental Setting

This technical memorandum assesses the parking demands from the Santa Ana College, School of Continuing Education's Centennial Education Center (CEC) at Centennial Park. It describes the land uses near the CEC and the existing parking, presents the parking requirements for the City of Santa Ana, and evaluates the campus parking demand.

Centennial Park is a regional park at 3000 W Edinger Avenue, Santa Ana, Orange County, near the western boundary of the City (see Figure 1, *Local Vicinity*). It is bordered by Edinger Avenue to the north, Fairview Drive to the east, the Santa Ana River to the west, and Godinez Fundamental High School (Godinez HS) and commercial uses to the south (see Figure 2, *Aerial Photograph*). Centennial Park is open from 5 AM to 11 PM, and there are no entrance or parking fees for park use. The park provides several recreational uses, including picnic areas, a playground, a lake, grass fields, and trails. Godinez HS includes a track and field, a soccer and football field, hard courts, and baseball fields. The high school has a joint use agreement with the City for the use of the track and field and ball fields.

Rancho Santiago Community College District (RSCCD) leases 2.6 acres in the northeast portion of Centennial Park; the campus consists of several buildings, landscaping between buildings, and walkways. The busiest times on the CEC campus are Monday through Thursday from 8 AM to 11 AM and from 6 PM to 9 PM. According to RSCCD, the peak populations during those times are approximately 570 people in the morning (500 students and 70 staff) and 545 people in the evening (500 students and 45 staff); between 11 AM and 6 PM, peak population is 250 (200 students and 50 staff). On Fridays and Saturdays, class hours are from 8 AM to 2 PM, and the peak population is approximately 490 (450 students and 40 staff).

CONTINUING EDUCATION CENTER PARKING DESCRIPTION

Four parking lots (A through D) near the CEC are the primary lots used by CEC students, staff, and visitors (see Figure 3, *Parking Counts Area Boundaries*). The parking lots are public, free, and do not require a parking permit. Table 1 and the following describes each parking lot evaluated in this analysis:

- » Lot A is just north of the CEC buildings. It is the largest surface parking lot in the park.
- » Lot B is to the southeast of the CEC buildings and very convenient to CEC users due to its proximity.
- » Lot C is about 350 feet to the southeast of the SEC buildings, immediately south of the skate park.
- » Lot D is about 500 feet northwest of the CEC buildings.

Table 1 Parking Lot Summary

Parking Lot	Acreage	Standard	Handicapped	Total
Lot A	3.61	322	12	334
Lot B	0.76	84	4	88
Lot C	0.33	35	2	37
Lot D	1.45	110	4	114
Total	6.15	548	22	573

Parking Requirements

The City of Santa Ana’s off-street parking requirements for educational uses are in the Municipal Code, Chapter 41, Article XV, Division 6, Educational Uses.” Section 41-1402—for colleges, trade schools, business schools, and adult education facilities—requires 1 space per 40 square feet of classroom floor area and 1 space per 333 square feet of office floor area. The City has no parking requirements for parks. (Santa Ana 2018). Section 41-1412—for child care facilities—requires 1 space per 8 individuals plus 1 space per supervisor or teacher. Also, child care facilities that provide care or instruction to 10 or more individuals at any one time must also provide a passenger loading/unloading zone.

The total building area for CEC is 43,906 square feet—approximately 20,600 square feet of classrooms and 7,400 square feet of office use. Other areas house supporting facilities such as storage, restrooms, electrical service, computer service, custodial, waiting area and lounges, counseling, resource center, hallways, etc. CEC also provides a child care facility in “C” Building with a maximum of 75 children and 10 staff at any one session. As shown in Table 2, the required parking according to the City’s Municipal Code is 556 spaces.

Centennial Park provides 573 spaces and 6.15 acres in Lots A through D. Under the City’s parking code, the CEC requires 97 percent of the available spaces (556 out of 573), or 5.97 acres (97% of 6.15 acres).

The CEC-leased area (2.6 acres) combined with the calculated parking area (5.97 acres) totals 8.57 acres.

Table 2 Parking Requirements per City of Santa Ana Municipal Code

Use	Classroom (SF)	Office (SF)	Required Parking Spaces	
			Classroom	Office
A Building	4,214	1,651	105.4	5.0
B Building	3,216	703	80.4	2.1
C Building	75 Students	10 Staff	--	--
D Building	6,323	615	158.1	1.9
E Building	4,340	1,284	108.5	3.9
F Building	2,474	439	61.9	1.3
G Building	0	2,709	0	8.1
Total	20,567	7,401	514.2	22.2
Adult Education Rate	1 per 40 sq. ft.	1 per 333 sq. ft.	--	--
Child Care Rate	1 per 8 children	1 per staff	9.4	10
Total Required (514.2 + 22.2 + 9.4 + 10)			556 spaces	

Parking Rates for Community Colleges and Parks

PlaceWorks reviewed parking generation rates in the Institute of Transportation Engineers' (ITE) *Parking Generation* (4th ed.) and the Urban Land Institute's (ULI) *Shared Parking* (2nd ed.), and determined that these rates were inappropriate for evaluating parking demands for CEC. ULI's *Shared Parking* does not provide parking rates for colleges and city parks.

The ITE rates apply to two-year junior, community, or technical colleges that do not have evening classes—the average rate is 0.18 spaces per student population. Because the CEC is for continuing education and adult classes, this average parking rate does not provide a good estimate of parking demand for the CEC.

The ITE also includes results from parking surveys at two city parks in Santa Barbara, California. On Saturday, parking demand ranged from 2.3 to 5.1 spaces per acre. However, the CEC is not a park use. Therefore, parking generation rates from the ITE and ULI were not used to evaluate parking demands for CEC.

Parking Counts and Site Visits

Parking occupancy counts were taken at Lots A and B in April 2018—on Saturday April 14 from 8 AM to 2PM and on Tuesday April 17 from 8 AM to 9 PM. The results of these counts are in Attachment A, *Parking Counts*. Occupancy at Lot C could not be counted because it was closed due to construction in the area. Lot D was not included because it is farther from CEC and anticipated to serve primarily park users and construction workers. It is likely that Lots A, B, and C also have spaces occupied by park visitors and Godinez HS students.

At site visits on Tuesday April 24 between 10:30 and 11:30 AM and Saturday April 29 between 10 AM and 11 AM, spot parking counts were taken at Lots C and D.

During a site visit on Tuesday April 24 between 10:30 and 11:30 AM, it was observed that CEC students mostly used Lots A and B, the closest and most convenient for CEC students and staff. Lot A is close to the park access driveway on Edinger Avenue, and Lot B is close to the CEC's main entrance. Spot parking counts were taken at Lot D and Lot C. Lot A and Lot B had the highest occupancy, with a few available parking spaces, and Lot C and Lot D had lower occupancy. In addition to CEC students and staff and park visitors, construction workers were parked at Lot D to work on the Mid-Basin Injection Project, a groundwater injection project. It was also observed that Lot C served skate park visitors.

During a second site visit on Saturday April 29 between 10 AM and 11 AM, no construction workers that were observed on Tuesday April 24 were present on Saturday. The number of park visitors was less than 20 during this site visit.

Tables 3 and 4 show the number of available spaces and parking occupancy per hour on a typical weekday and Saturday, respectively. Note that parking occupancy counts taken Tuesday April 17 and Saturday April 14 did not include Lots C and D. However, the table numbers were manually adjusted, based on the spot parking counts the site visits on April 24 and 29. The parking related to CEC was aggregated in the parking occupancy for Lots C and D.

Table 3 shows that the highest occupancies on a typical weekday were around 10 AM (98%) and 7 PM (99%), both in Lot A. These are peak population times at CEC. Lots A and B generally operate at full capacity during peak population hours, but Lots C and D have available capacity—their occupancy ranges from 13 to 30 percent in the morning and 28 to 30 percent in the evening. Approximately 40 spaces were available at Lot D and more than 20 spaces available at Lot C on April 24 at 10:30 AM. Occupancy charts per lot are in Attachment B, *Parking Occupancy Charts*.

Table 4 shows that on a typical Saturday, occupancy rates ranged from 4 to 88 percent for Lot A, with the highest occupancy at around 11 AM. In Lot B, the rates ranged from 15 to 97 percent, with the highest occupancy around 9 AM. Lots C and D were relatively empty—occupancy rates were 1 percent to 25 percent.

Overall parking conditions at Lots A through D are illustrated in Charts 1 and 2. The highest occupancy rates were on weekdays from 9 AM to 10 AM and from 7 PM to 9 PM. On a Saturday, occupancy exceeded 60 percent around 9 AM and peaked at 72 percent around 11 AM.

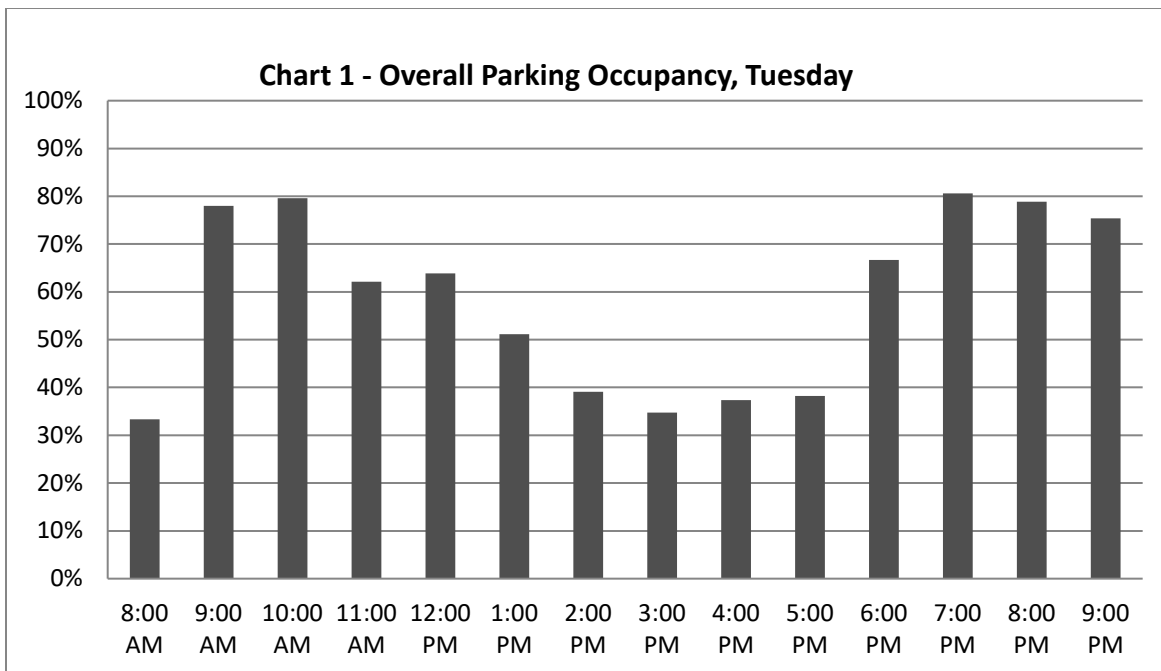
Site observations and the parking counts demonstrated that Lots A and B are heavily used by CEC in the morning and evening. However, even when these lots were close to full, there were several parking spaces available in Lots C and D for park visitors. Therefore, the parking demand for the CEC does not appear to result in a shortage of parking for park visitors on weekdays.

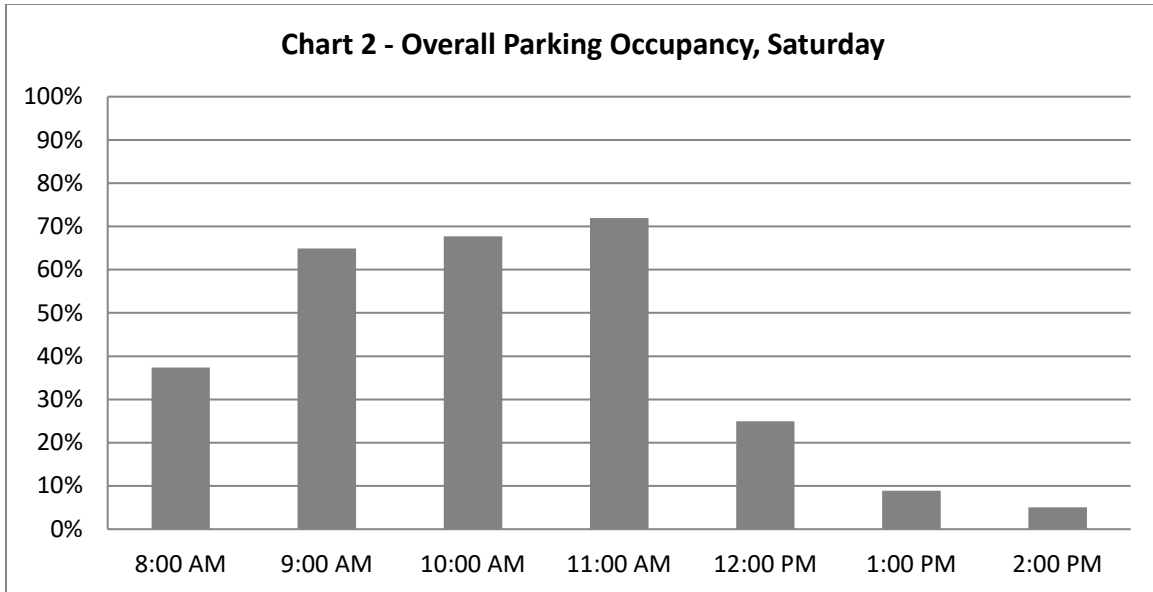
Table 3 – Parking Occupancy Summary, Tuesday

Lot	Stall Type	Inventory	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM
Lot A	General	322	134	314	318	252	267	210	165	140	134	133	262	322	317	312
	Handicapped	12	3	7	10	8	8	6	3	3	2	3	4	9	10	7
	Subtotal	334	137	321	328	260	275	216	168	143	136	136	266	331	327	319
	Occupancy		41%	96%	98%	78%	82%	65%	50%	43%	41%	41%	80%	99%	98%	96%
Lot B	General	84	35	83	83	60	53	46	32	37	58	63	80	84	79	70
	Handicapped	4	0	0	0	1	1	1	1	0	1	1	0	1	1	0
	Subtotal	88	35	83	83	61	54	47	33	37	59	64	80	85	80	70
	Occupancy		40%	94%	94%	69%	61%	53%	38%	42%	67%	73%	91%	97%	91%	80%
Lots C and D ¹	General	145	18	41	42	33	35	28	22	18	18	18	35	43	42	41
	Handicapped	6	1	2	3	2	2	2	1	1	1	1	1	3	3	2
	Subtotal	151	19	43	45	35	37	30	23	19	19	19	36	46	45	43
	Occupancy		13%	28%	30%	23%	25%	20%	15%	13%	13%	13%	24%	30%	30%	28%
Total Lots A through D = 573 (548 general + 22 handicapped)																
Total Stalls Occupied			191	447	456	356	366	293	224	199	214	219	382	462	452	432
Total Occupancy			33%	78%	80%	62%	64%	51%	39%	35%	37%	38%	67%	81%	79%	75%
Bold: Highest overall parking occupancy.																

Table 4 Parking Occupancy Summary, Saturday

	Stall Type	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM
Lot A	General	156	253	271	294	81	24	14
	Accessible	3	2	2	1	1	0	0
Subtotal	334	159	255	273	295	82	24	14
	Occupancy	48%	76%	82%	88%	25%	7%	4%
Lot B	General	35	84	81	80	50	24	13
	Accessible	0	1	0	0	0	0	0
Lot B Total	88	35	85	81	80	50	24	13
	Occupancy	40%	97%	92%	91%	57%	27%	15%
Lot C and D	General	19	30	32	35	10	3	2
	Accessible	1	2	2	2	1	0	0
	151	20	32	34	37	11	3	2
	Occupancy	13%	21%	23%	25%	7%	2%	1%
Total Lots A through D = 573 (548 general + 22 handicapped)								
Total Stalls Occupied		214	372	388	412	143	51	29
Total Occupancy		37%	65%	68%	72%	25%	9%	5%





CONCLUSION

The highest parking occupancy was on weekdays at 7 PM—99 percent for Lot A, 97 percent for Lot B, and 30 percent for Lots C and D. These rates were used to determine the occupied area in acres. Occupancy observed in Lots C and D were combined into Lot C for the calculation. Table 5 summarizes the parking lot areas, their occupancy related to the CEC, and the total area occupied by CEC staff and students, about 4.64 acres.

Table 5 Occupied CEC Parking Areas

Parking	Occupancy		Area	Equivalent Occupied Area
	Percent	Stalls		
Lot A	99%	331	3.61 acres	3.57 acres
Lot B	97%	85	0.76 acres	0.74 acres
Lot C	99%	37	0.33 acres	0.33 acres
Lot D	0%	0	1.45 acres	0 acre
TOTAL	--		6.15 acres	4.64 acres

CEC and Centennial Park share parking lots, and CEC uses about 453 spaces on a typical weekday, equivalent to approximately 4.64 acres of the Centennial Park parking lots. The RSCCD's leased 2.6 acres include "A" through "G" buildings and the landscaping and walkways between buildings. Adding 2.6 acres to the 4.64 acres for parking, the total area used by CEC is 7.24 acres.

Based on the City of Santa Ana's parking requirements, the total area required for the CEC buildings and parking is 8.57 acres. If the CEC were to seek another site to house the existing program, it would require approximately 8.57 acres or multiple-story buildings.

References

Institute of Transportation Engineers (ITE). 2010. Parking Generation, 4th Edition.

Santa Ana, City of. 2018. Santa Ana Municipal Code, Chapter 41, Zoning.
https://library.municode.com/ca/santa_ana/codes/code_of_ordinances?nodeId=PTIITHCO_CH41ZO_ARTXVOREPA_DIV6EDUS_S41-1402COTRSCBUSCADEDFA

Santa Ana College School of Continuing Education Center CEC Fact Sheet.
[https://www.sac.edu/research/Pages/Centennial-Education-Center-\(CEC\)-Fact-Sheet.aspx](https://www.sac.edu/research/Pages/Centennial-Education-Center-(CEC)-Fact-Sheet.aspx)

Urban Land Institute (ULI). Shared Parking. Second Edition, 2nd Edition.

Figure 1 - Local Vicinity



— Centennial Park (3000 W. Edinger Ave, Santa Ana)
 - - - City Boundary

0 3
 Scale (Miles)

Source: ESRI, 2018



PlaceWorks

Figure 2 - Aerial Photograph



Centennial Park (3000 W. Edinger Ave, Santa Ana)

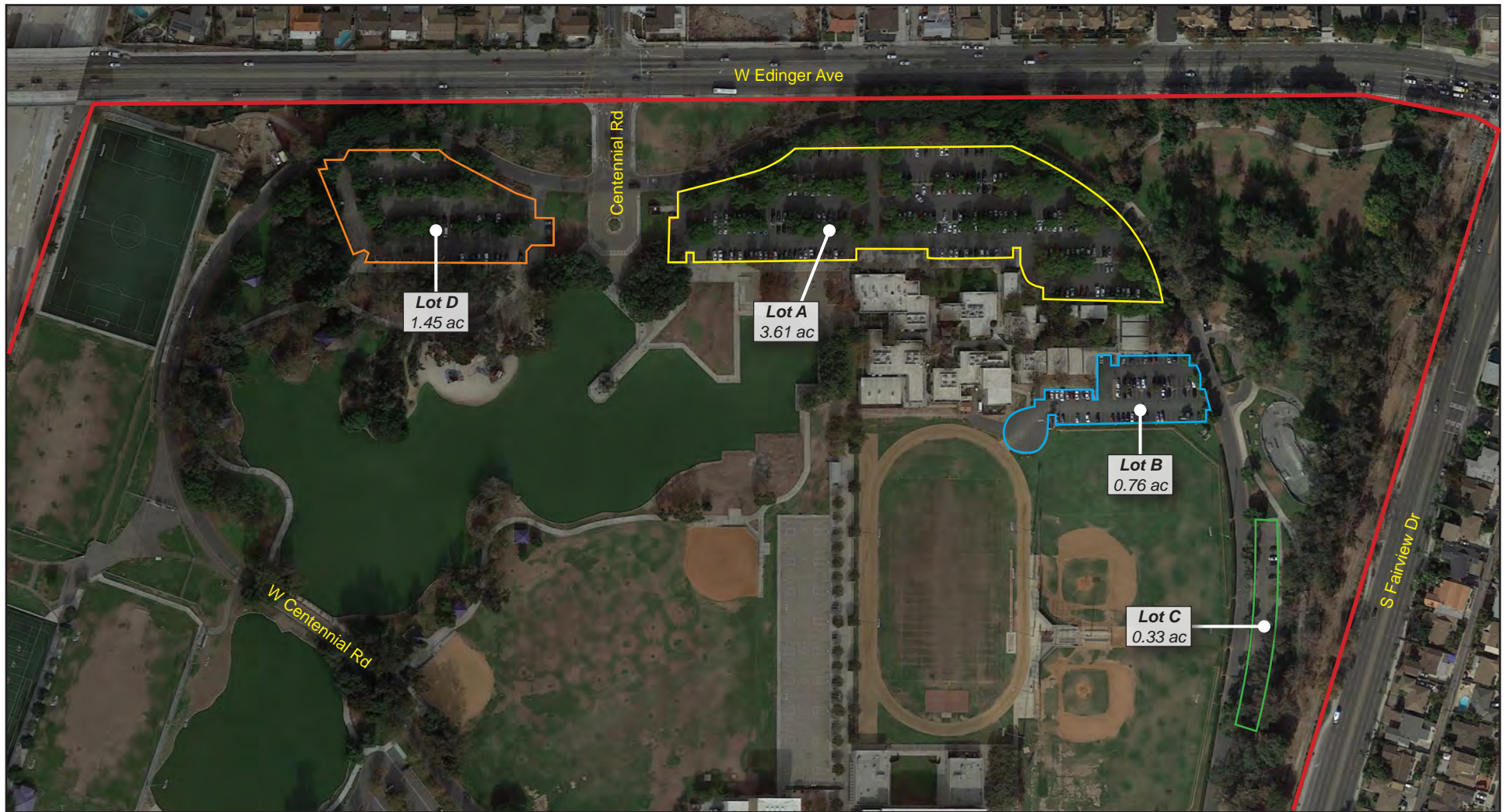
City Boundary

0 400
Scale (Feet)



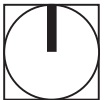
Source: Google Earth Pro, 2018

Figure 3 - Parking Counts Area Boundaries



— Centennial Park (3000 W. Edinger Ave, Santa Ana)

0 300
Scale (Feet)



Source: Google Earth Pro, 2018

PlaceWorks

Attachment A – Parking Counts

Centennial Park

SW Corner of
Fairview Street & Edinger Avenue
Santa Ana, CA
Tuesday, April 17, 2018

		Inv.	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00
Lot A	General Stalls	322	134	314	318	252	267	210	165	140	134	133	262	322	317	312
	Handicapped	12	3	7	10	8	8	6	3	3	2	3	4	9	10	7
	SUBTOTAL	334	137	321	328	260	275	216	168	143	136	136	266	331	327	319
Lot B	General Stalls	84	35	83	83	60	53	46	32	37	58	63	80	84	79	70
	Handicapped	4	0	0	0	1	1	1	1	0	1	1	0	1	1	0
	SUBTOTAL	88	35	83	83	61	54	47	33	37	59	64	80	85	80	70
Lot C	General Stalls	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Handicapped	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	SUBTOTAL	37	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL OCCUPANCY		459	172	404	411	321	329	263	201	180	195	200	346	416	407	389
TOTAL %		-	37%	88%	90%	70%	72%	57%	44%	39%	42%	44%	75%	91%	89%	85%

Centennial Park

SW Corner of
Fairview Street & Edinger Avenue
Santa Ana, CA
Saturday, April 14, 2018

		Inv.	8:00	9:00	10:00	11:00	12:00	13:00	14:00
Lot A	General Stalls	322	156	253	271	294	81	24	14
	Handicapped	12	3	2	2	1	1	0	0
	SUBTOTAL	334	159	255	273	295	82	24	14
Lot B	General Stalls	84	35	84	81	80	50	24	13
	Handicapped	4	0	1	0	0	0	0	0
	SUBTOTAL	88	35	85	81	80	50	24	13
Lot C	General Stalls	35	0	0	0	0	0	0	0
	Handicapped	2	0	0	0	0	0	0	0
	SUBTOTAL	37	0	0	0	0	0	0	0
TOTAL OCCUPANCY		459	194	340	354	375	132	48	27
TOTAL %		-	42%	74%	77%	82%	29%	10%	6%

Adjusted Parking Counts

Centennial Park

SW Corner of

Fairview Street & Edinger Avenue

Santa Ana, CA

Tuesday, April 17, 2018

		Inv.	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00
Lot A	General Stalls	322	134	314	318	252	267	210	165	140	134	133	262	322	317	312
	Handicapped	12	3	7	10	8	8	6	3	3	2	3	4	9	10	7
	SUBTOTAL	334	137	321	328	260	275	216	168	143	136	136	266	331	327	319
	Occupancy		41%	96%	98%	78%	82%	65%	50%	43%	41%	41%	80%	99%	98%	96%
Lot B	General Stalls	84	35	83	83	60	53	46	32	37	58	63	80	84	79	70
	Handicapped	4	0	0	0	1	1	1	1	0	1	1	0	1	1	0
	SUBTOTAL	88	35	83	83	61	54	47	33	37	59	64	80	85	80	70
	Occupancy		40%	94%	94%	69%	61%	53%	38%	42%	67%	73%	91%	97%	91%	80%
Lot C	General Stalls	35	14	34	35	27	29	23	18	15	14	14	28	35	35	34
	Handicapped	2	1	2	2	2	2	1	1	1	1	1	2	2	2	2
	SUBTOTAL	37	15	36	37	29	31	24	19	16	15	15	30	37	37	36
	Occupancy		41%	97%	100%	78%	84%	65%	51%	43%	41%	41%	81%	100%	100%	97%
TOTAL OCCUPANCY		459	187	440	448	350	360	287	220	196	210	215	376	453	444	425
TOTAL %		-	41%	96%	98%	76%	78%	63%	48%	43%	46%	47%	82%	99%	97%	93%

Adjusted Parking Counts

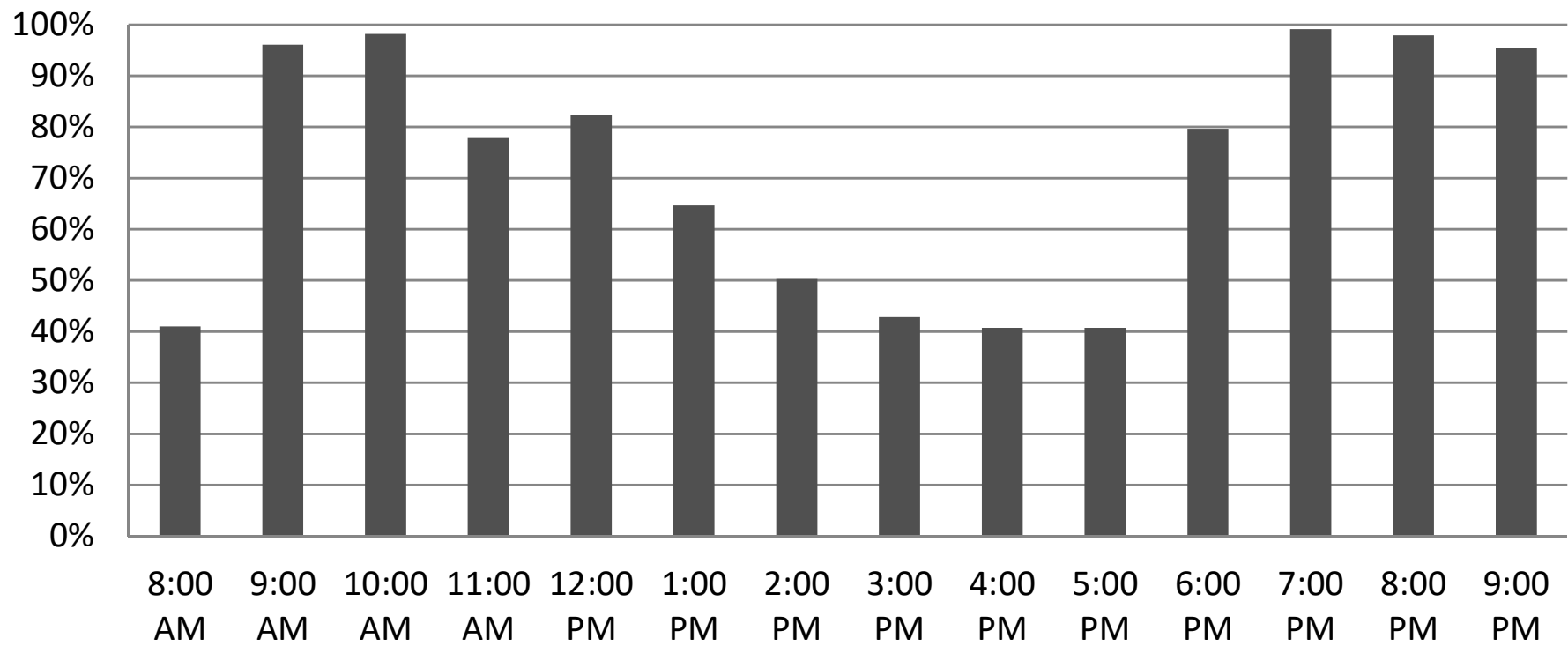
Centennial Park

SW Corner of
Fairview Street & Edinger Avenue
Santa Ana, CA
Saturday, April 14, 2018

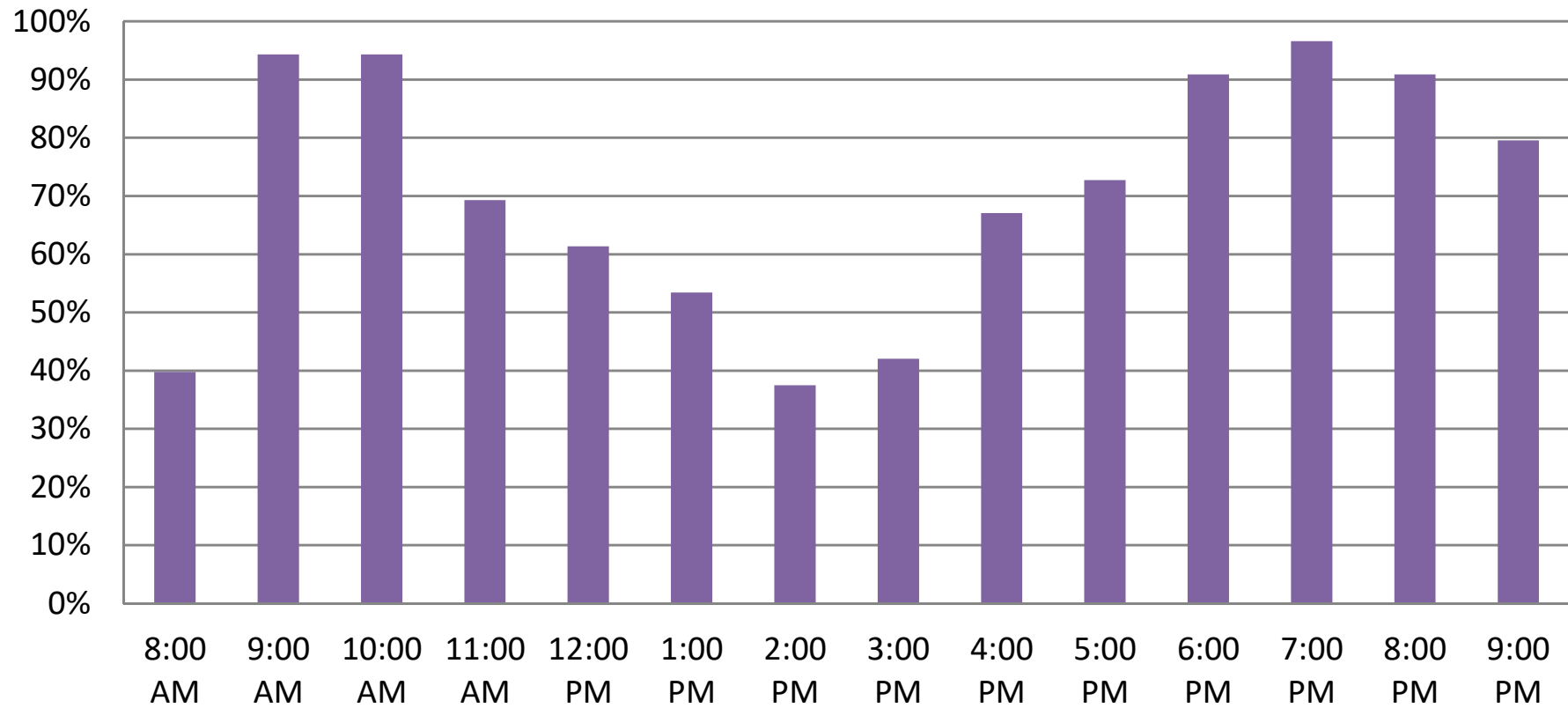
		Inv.	8:00	9:00	10:00	11:00	12:00	13:00	14:00
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	SUBTOTAL	334	159	255	273	295	82	24	14
	Occupancy		48%	76%	82%	88%	25%	7%	4%
Lot B	General Stalls	84	35	84	81	80	50	24	13
	Handicapped	4	0	1	0	0	0	0	0
	SUBTOTAL	88	35	85	81	80	50	24	13
	Occupancy		40%	97%	92%	91%	57%	27%	15%
Lot C	General Stalls	35	19	30	32	35	10	3	2
	Handicapped	2	1	2	2	2	1	0	0
	SUBTOTAL	37	20	32	34	37	11	3	2
	Occupancy		54%	86%	92%	100%	30%	8%	5%
TOTAL OCCUPANCY		459	214	372	388	412	143	51	29
TOTAL %		-	47%	81%	85%	90%	31%	11%	6%

Attachment B – Parking Occupancy Charts

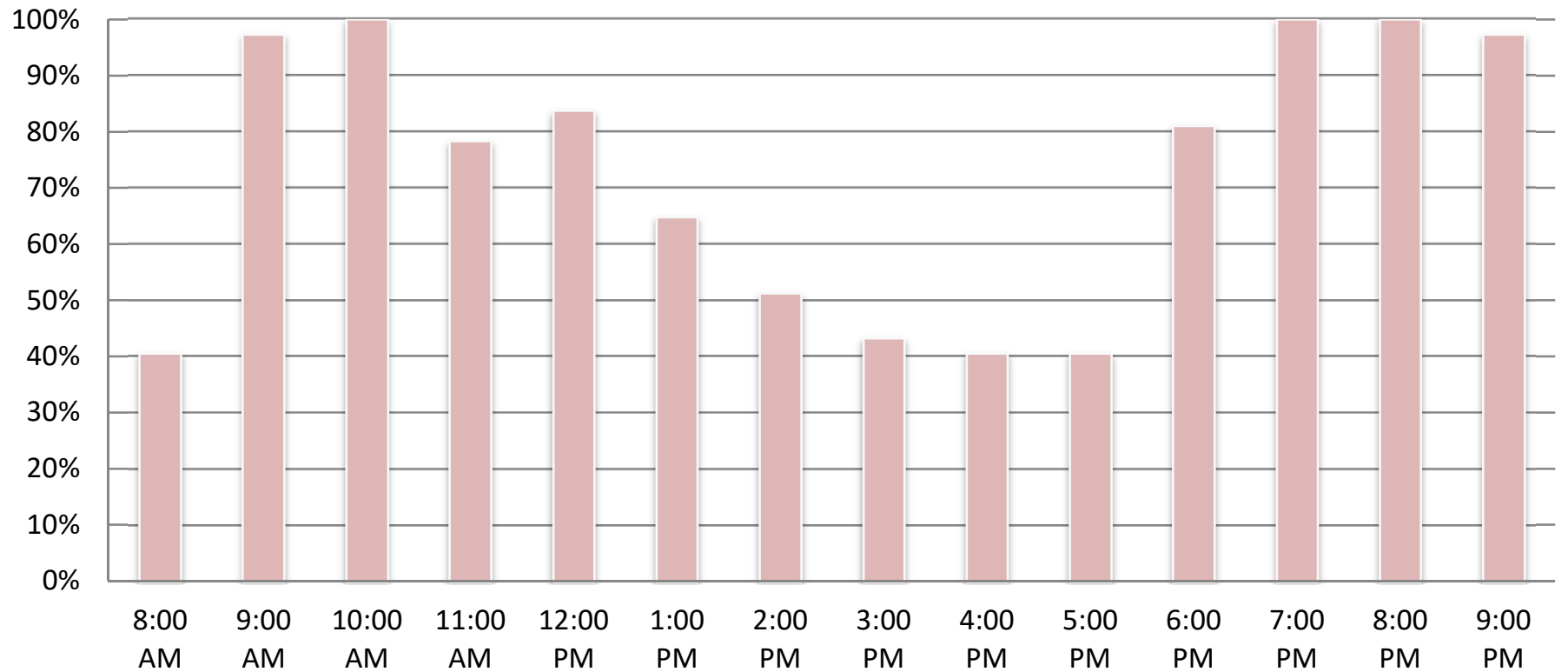
Lot A Parking Occupancy, Tuesday



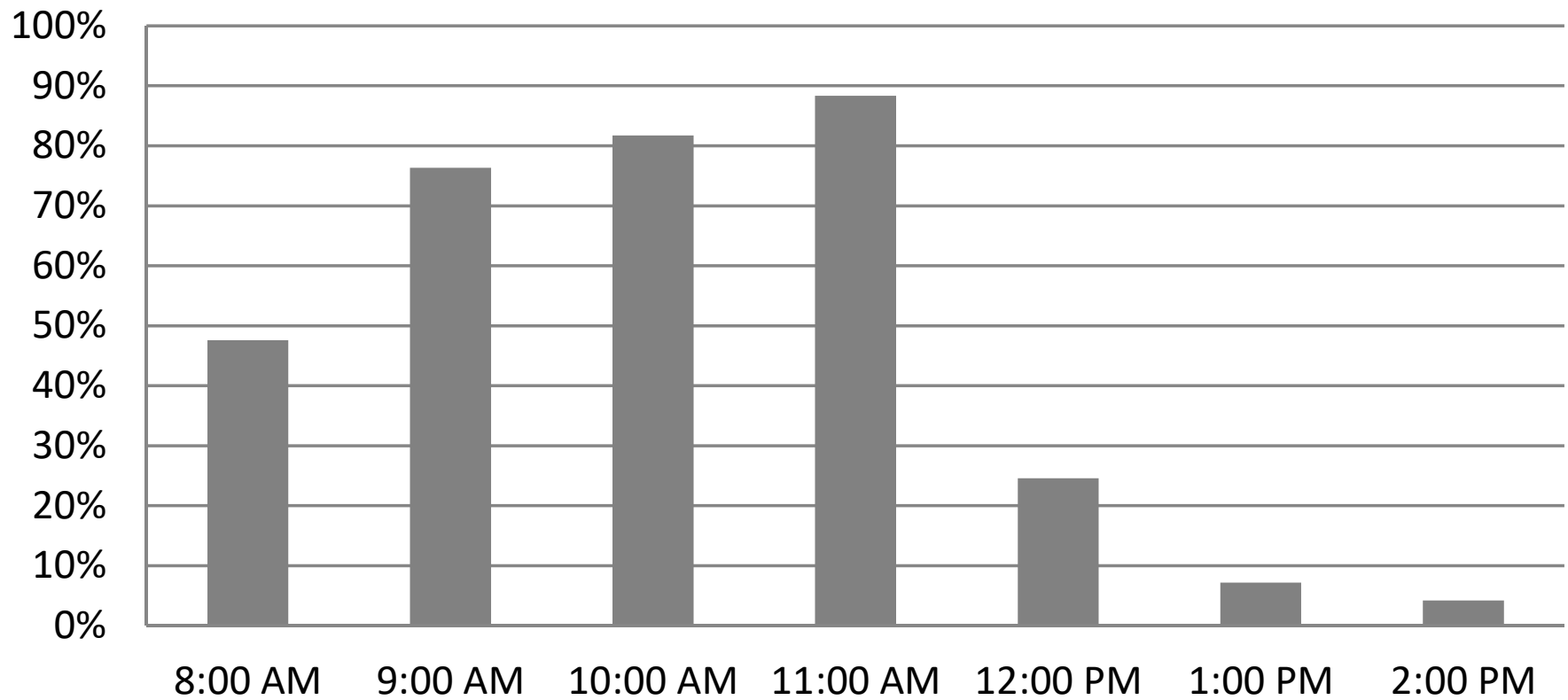
Lot B Parking Occupancy, Tuesday



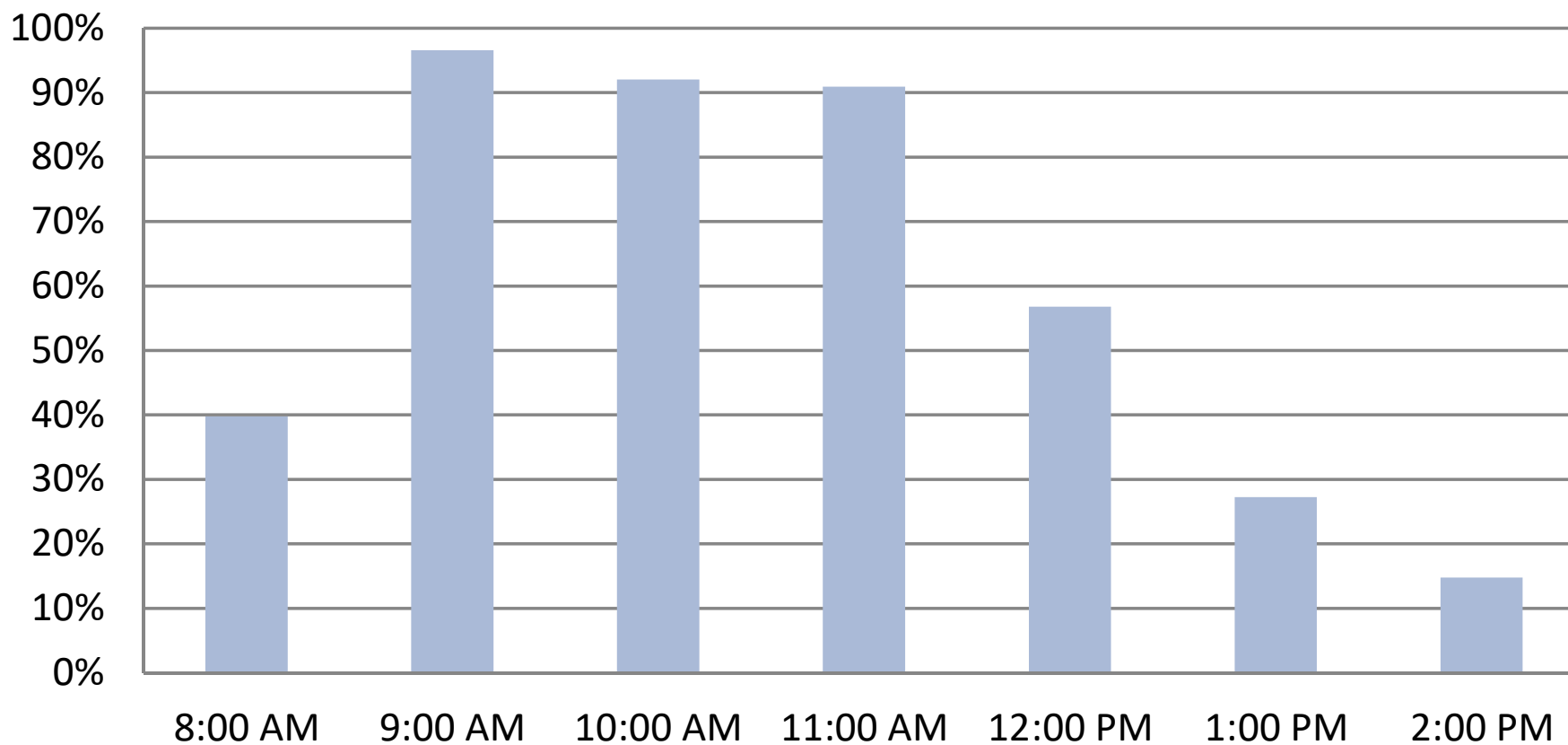
Lot C Parking Occupancy, Tuesday



Lot A Parking Occupancy, Saturday



Lot B Parking Occupancy, Saturday



Lot C Parking Occupancy, Saturday

